

Application No.10/758,786
Response to Office Action

Customer No. 01933

Listing of Claims:

1. (Currently Amended) A SDH synchronized digital hierarchy (SDH) test apparatus ~~for substituting a part of payload of received SDH data with a desired data and transmitting,~~
comprising:

5 * an Rx SOH section overhead (SOH) processor for performing frame detection of ~~said~~ received SDH data;

 * an Rx ~~AU~~ administrative unit (AU) processor for extracting AU data composed of an AU pointer of and a payload from data processed by said Rx SOH processor ~~and payload,~~ and for detecting
10 an information leading head position designated by said AU pointer;

 a Tx AU processor for generating AU data wherein in which a part of the payload of AU data extracted by said Rx AU processor is substituted with a desired data;

15 a Tx SOH processor for generating a new SDH data with the AU data generated by said Tx AU processor and the data from said Rx SOH processor and transmitting the new SDH data;

 a FIFO memory installed between said Rx AU processor and said Tx AU processor, for sequentially storing ~~sequentially~~
20 payload data of AU data extracted by said Rx AU processor and outputting to said Tx AU processor in ~~the~~ an order of memorization; and

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an AU pointer processor for outputting an AU pointer
adjusting the a number of data in said FIFO memory, allowing said
25 Tx AU processor to read in the payload of AU data, after a time
lag ($\Delta T2 + \Delta T4$) of an information leading head position of the
payload generated by ~~the~~ processing of AU data by said Rx AU
processor and said Tx AU processor, by extracting the number of
data in said FIFO memory,

30 wherein said Tx AU processor is ~~composed~~ adapted to read out
the payload of AU data from said FIFO memory, generate AU data,
and output to said Tx SOH processor so that said information
leading head position is at ~~the~~ a position designated by ~~the~~ an
AU pointer value output from said AU pointer processor.

2. (Currently Amended) ~~A~~ The SDH test apparatus according
to claim 1, further comprising:

~~a~~ an Rx ~~TU~~ tributary unit (TU) processor for extracting TU
data by from the data processed by said Rx AU processor;

5 a second FIFO memory for successively storing ~~successively~~
the TU data extracted by said Rx TU processor;

a Tx TU processor for performing transmission TU processing
for TU data output from said second FIFO memory in ~~the~~ an order
of memorization; and

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- 10 a TU pointer processor ~~composed which is adapted~~ to decide
the a TU pointer anticipating the an information leading head
position shifting due to the a processing time of the TU data by
the Rx TU processor and the Tx TU processor, ~~the and a~~ delay
time to maintain for stably maintaining a data storage state of
15 said second FIFO memory ~~data storage state stable~~.

3. (Currently Amended) A ~~SDH~~ synchronized digital hierarchy
(SDH) test method ~~for substituting a part of payload of received~~
~~SDH data with a desired data and transmitting~~, comprising the
~~steps of:~~

- 5 Rx ~~SOH~~ section overhead (SOH) processing including frame
detection of ~~said~~ received SDH data;
- Rx ~~AU~~ administrative unit (AU) processing including
extraction of AU data composed of an AU pointer of and a payload
from data processed by said Rx SOH processing and payload, and
10 detection of ~~the an~~ information leading head position designated
by said AU pointer;
- Tx AU processing including generation of AU data ~~wherein in~~
which a part of the payload of AU data extracted by said Rx AU
processing is substituted with a desired data;
- 15 Tx SOH processing including generation of a new SDH data
with the AU data generated by said Tx AU processing and the data
by from said Rx SOH processing and transmission thereof;

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20 sequentially storing ~~sequentially the~~ AU data extracted by
said Rx AU processing between said Rx AU processing and said Tx
AU processing in a FIFO memory and transmitting to said Tx AU
processing in ~~the~~ an order of memorization; and

AU pointer processing for outputting an AU pointer adjusting
~~the~~ a number of data in said FIFO memory, allowing said Tx AU
processing to read in the payload of AU data, after a time lag
25 ($\Delta T_2 + \Delta T_4$) of an information leading head position of the
payload generated by the processing of the AU data by said Rx AU
processing and said Tx AU processing, by extracting the number of
data in said FIFO memory,

wherein said Tx AU processing ~~is composed to read~~ includes
30 reading out the payload of AU data from said FIFO memory,
~~generate~~ generating AU data, and ~~output~~ outputting to said Tx AU
processing so that said information leading head position is at
~~the~~ a position designated by ~~the~~ an AU pointer value output from
said AU pointer processing.

4. (Currently Amended) ~~A~~ The SDH test method according to
claim 3, further comprising the steps of:

Rx ~~TU~~ tributary unit (TU) processing for extracting TU data
by from the data processed by said Rx AU processing;

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5 successively storing ~~successively~~ the TU data extracted by
said Rx TU processing in a second FIFO memory;

Tx TU processing for performing Tx TU processing for TU data
output from said second FIFO memory in ~~the~~ an order of
memorization; and

10 TU pointer processing to decide ~~the~~ a TU pointer
anticipating ~~the~~ an information leading head position shifting
due to ~~the~~ a processing time of the TU data by the Rx TU
processing and the Tx TU processing, ~~the~~ and a delay time ~~to~~
~~maintain~~ for stably maintaining a data storage state of said
15 second FIFO memory ~~data storage state stable~~.